

## **AUTHORSHIP TRENDS IN INDIAN WILDLIFE AND FISHERIES LITERATURE - A BIBLIOMETRIC STUDY**

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*The authorship and collaborative research patterns in Indian wildlife and fisheries based on the data collected from "Wildlife Review and Fish Review" published between 1980 to 1989 are studied. The proportion of single authored papers has decreased from 63.68% in 1980 to 52.74% in 1989. During the same period there was an increase in the average number of authors per paper from 1.57 in 1980 to 1.70 in 1989. The degree of collaborative research also increased from 0.36 to 0.47.*

### **INTRODUCTION**

Collaborative research has become a well established feature in the field of science and technology. It is observed that there is a consistently increasing trend towards collaboration among various branches of science and technology which leads to collaborative authorship in literature. A large number of studies in the area of authorship pattern are conducted. For example, Price [3], on the basis of a survey of Chemical Abstracts observed that there was a steady increase in the trend towards multiple authorship. But, so far, no such study has been conducted in India in the field of wildlife, ecology, fisheries and natural history. Therefore, an attempt has been made to study authorship patterns and degree of collaboration in Indian wildlife and fisheries literature.

### **OBJECTIVES**

The objectives of the study were to determine:

- a) authorship patterns in Indian wildlife and fisheries literature; and
- b) the degree of collaboration in Indian wildlife and fisheries literature.

### **METHODS**

Authorship data in the field of Indian wildlife and fisheries literature were gathered from "Wildlife Review and Fish Review" for the years 1980 to 1989. This indexing service reports world literature in the field of wildlife and fisheries. Total number of entries collected were 2,612. Each item was analyzed and tabulated to study its collaborative nature.

### **DISCUSSION**

The data reveals that there were 1430 single authored papers and 778 and 252 papers having two and three authors respectively during 1980-89 (Table 1.) The number of papers having four and more authors were only 152 (including the papers published by corporate bodies/organisations). From this analysis it is clear that single authored papers were more than multi-authored papers (Figure 1). It may be due to the fact that during this period a large number of studies were made on the specific aspects of various species which are generally conducted by researchers individually.

#### **Single Authored Vs. Multi-authored Papers in Indian Wildlife and Fisheries Literature.**

It is observed that in 1980 the percentage of single authored and multi-authored papers were 63.68 and 36.32 respectively (Table 2). However, in 1989 the percentage of single authored papers came down to 52.74 and that of multi-authored papers increased to 47.26. This is because of the advent of multifaceted disciplines like habitats, biodiversity, ecodevelopment, etc. Such studies can best be conducted by a team of researchers employing specialists from various fields. A trend of collaborative authorship is indicated in Figure 2.

Table 1

Number of authors of Indian wildlife and fisheries research papers

Year	Number of papers with 1,2,3,4 and more authors respectively				Total number of papers
	1 (%)	2(%)	3(%)	4 & more %	
1980	149 (63.68)	57 (24.36)	17 (7.26)	11 (4.70)	234
1981	113 (57.95)	56 (28.72)	20 (10.26)	6 (3.08)	195
1982	115 (52.27)	73 (33.18)	21 (9.55)	11 (5.00)	220
1983	107 (54.87)	64 (32.82)	16 (8.21)	8 (4.10)	195
1984	136 (51.32)	75 (28.30)	33 (12.45)	21 (7.92)	265
1985	141 (56.17)	63 (25.11)	29 (11.55)	18 (7.17)	251
1986	227 (58.35)	109 (28.02)	32 (8.23)	21 (5.40)	389
1987	133 (48.72)	91 (33.33)	28 (10.26)	21 (7.69)	273
1988	155 (52.01)	95 (31.89)	31 (10.40)	17 (5.70)	298
1989	154 (52.74)	95 (32.53)	25 (8.56)	18 (6.16)	292
Total	1430 (54.75)	777 (29.85)	252 (9.65)	152 (5.82)	2612

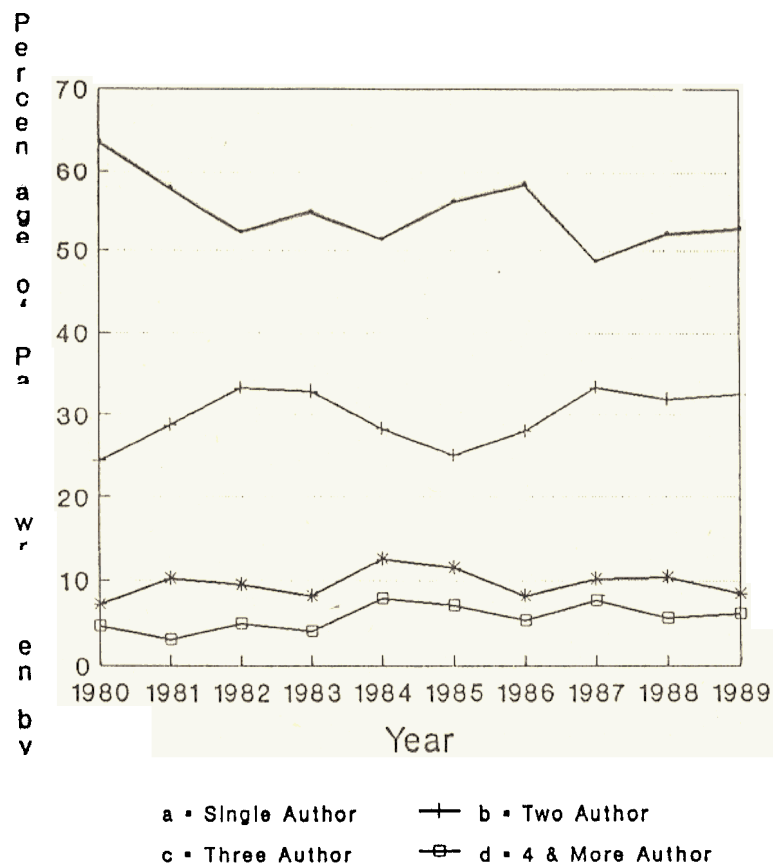


Fig. 1 : Distribution of No. of Authors of Indian Wildlife &amp; Fisheries Research Papers

Table 2

*Single Vs multiple authors*

Year	With single author		With multiple author		Total no. of papers
	No. of papers	%	No. of papers	%	
1980	149	63.68	85	36.32	234
1981	113	57.95	82	42.05	195
1982	115	52.27	105	47.73	220
1983	107	54.87	88	45.13	195
1984	136	51.32	129	48.68	265
1985	141	56.17	110	43.82	251
1986	227	58.35	162	41.65	389
1987	133	48.72	140	51.28	273
1988	155	52.01	143	47.99	298
1989	154	52.74	138	47.26	292
Total	1430	54.75	1182	45.25	2612

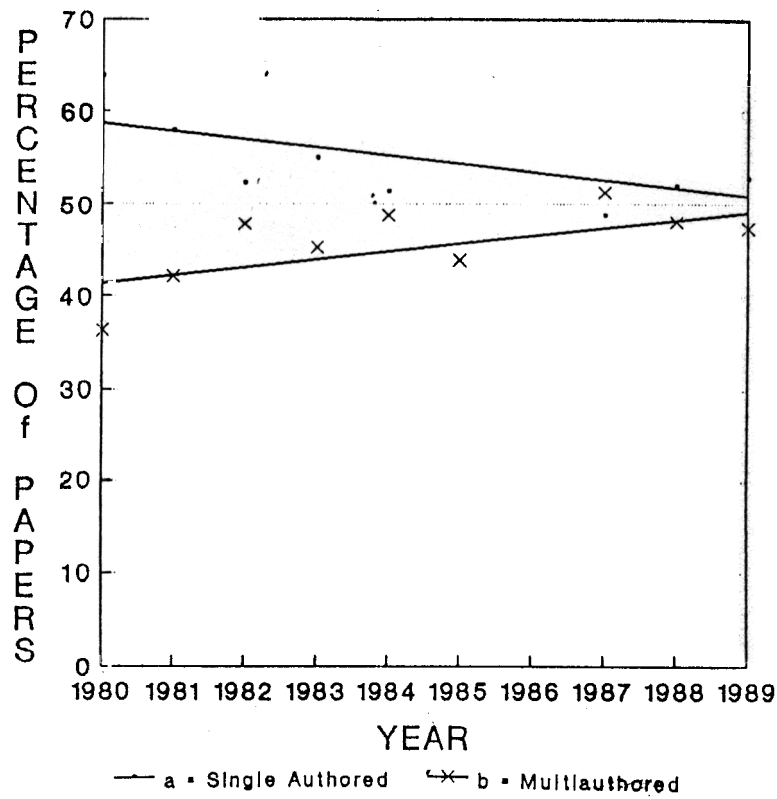


Fig. 2 : Trend of Single Vs. Multiple Authors

### Degree of Collaboration in Wildlife and Fisheries Literature

The degree of collaboration was defined as the ratio of the number of collaborative research papers to the total number of research papers in the discipline during a certain period of time. It is expressed as :

$$CC = Nm/(Nm+Ns)$$

Where, CC is the degree of collaboration in a discipline.

Nm is the number of multi-authored research papers in the discipline published during a year.

Ns is the number of single authored papers in the discipline published during the same year.

Using this formula, the degree of collaboration in the field of Indian wildlife and fisheries literature has been determined and given in Table 3. It shows that in 1980 the degree of collaboration

was 0.36 and in 1987 it increased up to 0.51. But in 1989 it again came down to 0.47 (Figure 3) but still showing trends towards multi-authorship and more collaboration.

Table 3

*Degree of collaboration in Indian wildlife and fisheries literature*

Year	Degree of collaboration
1980	0.36
1981	0.42
1982	0.48
1983	0.45
1984	0.49
1985	0.44
1986	0.42
1987	0.51
1988	0.48
1989	0.47

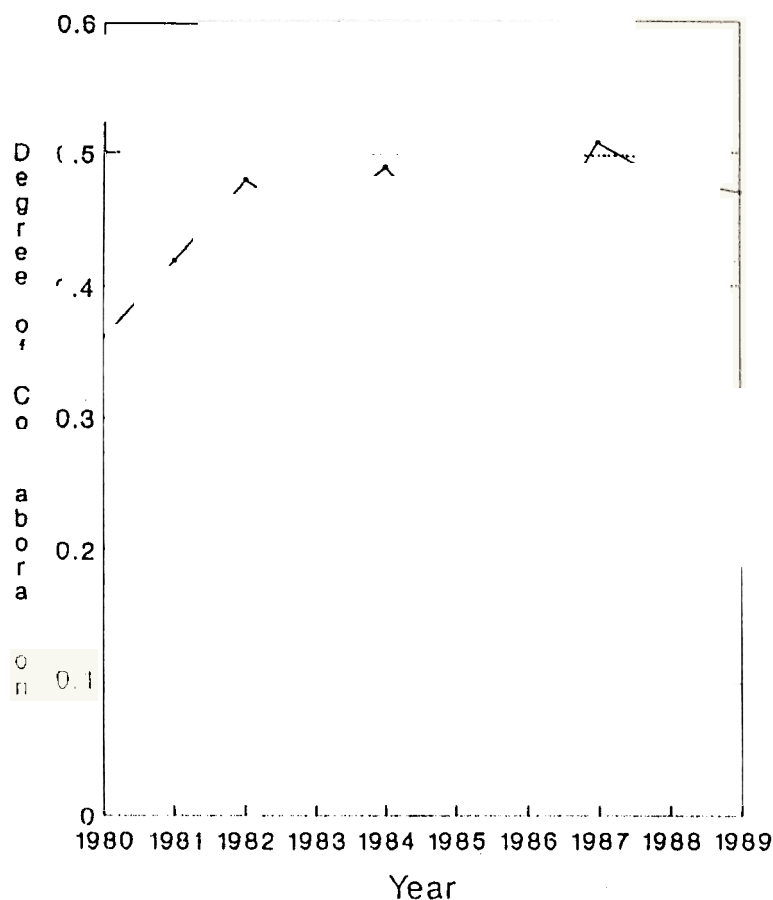


Fig. 3 : Degree of Collaboration

Table 4

*Average number of authors per paper (AAP) in Indian wildlife and fisheries literature*

Year	Total no. of papers P	Total no. of authorship A	Average no. of authors per paper (AAP=A/P)
1980	234	367	1.57
1981	195	312	1.6
1982	220	379	1.72
1983	195	320	1.64
1984	265	470	1.77
1985	251	439	1.75
1986	389	636	1.63
1987	273	508	1.86
1988	298	515	1.73
1989	292	497	1.70

**Average Authorship Per Paper (AAP)**

In the field of wildlife and fisheries the average

number of authors per paper has also increased from 1.57 in 1980 to 1.70 in 1989 (Table 4) and (Figure 4).

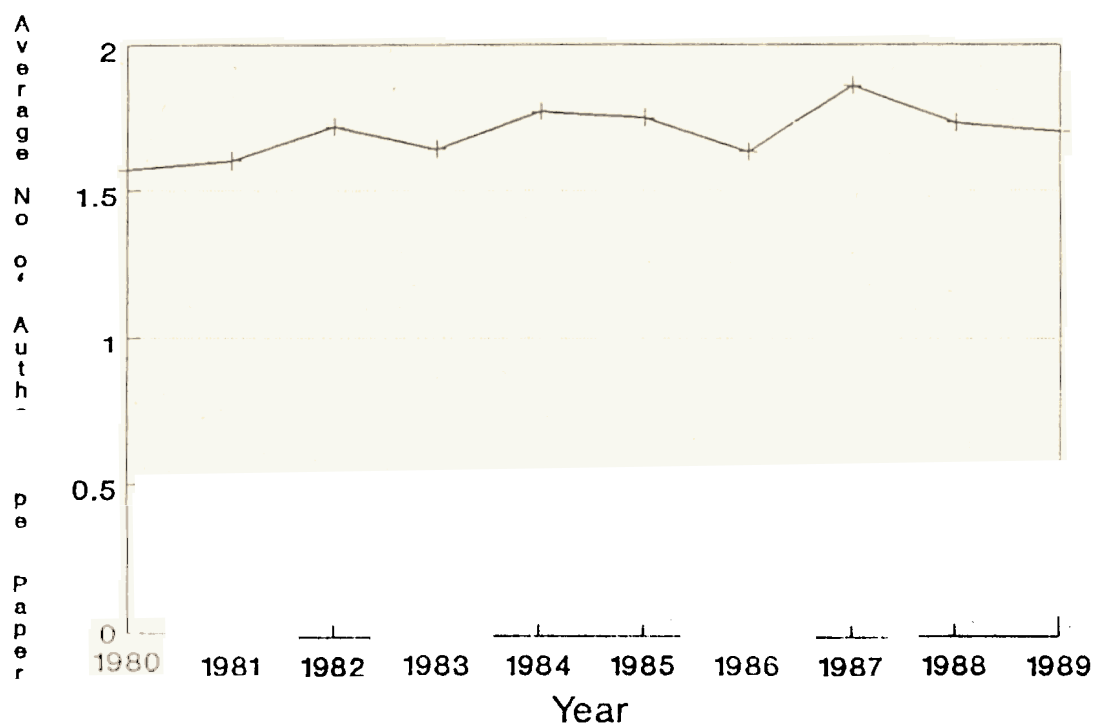


Fig. 4 Average Number of Authors Per Paper (AAP)

## CONCLUSION

The trend towards collaborative research is seen increasing during 1980-89. This is a good sign for a new disciplines like wildlife and fisheries.

## REFERENCES

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